```
|  10     |  20     |  30     |  40     |  50     |  60     |  70     |  80     |  90     | 100
   1 GCCACGAAGG CCCAGACTTT GACCGTTCTT CACCACCACT CCAGCCTCCT  CCTGTGAACT CACTGACCAC CGAGAACAGA TTCCACTCTT TACCATTCAG 100
 101 TCTCACCAAG ATGCCCAATA CCAATGGAAG TATTGGCCAC AGTCCACTTT  CTCTGTCAGC CCAGTCTGTA ATGGAAGAGC TAAACACTGC ACCCGTCCAA 200
 201 GAGAGTCCAC CCTTGGCCAT GCCTCCTGGG AACTCACATG GTCTAGAAGT  GGGCTCATTG GCTGAAGTTA AGGAGAACCC TCCTTTCTAT GGGGTAATCC 300
 301 GTTGGATCGG TCAGCCACCA GGACTGAATG AAGTGCTCGC TGGACTGGAA  CTGGAAGATG AGTGTGCAGG CTGTACGGAT GGAACCTTCA GAGGCACTCG 400
 401 GTATTTCACC TGTGCCCTGA AGAAGGCGCT GTTTGTGAAA CTGAAGAGCT  GCAGGCCTGA CTCTAGGTTT GCATCATTGC AGCCGGTTTC CAATCAAGAT 500
 501 TGAGCGCTGT AACTCTTTAG CATTTGGAGG CTACTTAAGT GAAGTAGT:G  AAGAAAATAC T:CCA:CCAA AAATGGAAAA AGAARGCTTG GAGATAATGA 600
 601 TTGGGGAAAG AAGAAAGGCA TCCAAGGGTC ATTACAATTC TTGKTACTTA  G:ACTCAACC TTATTCTKGC TTATTTKGCT TTTAGTTCTG TTCTNGGACA 700
 701 CTGGTGTTAC TTTAGACCCC AAAGAAAAAG AAACGATGTT AGAATATTWT  WKWGMMACCC AAGAGCTACT GAGGACAGAA ATTGTTAATC CTCTGAGAAT 800
 801 ATATGGATAT GTGTGTGCCA CAAAAATTAT GAAACTGAGG AAAATACTTG  AAAAGGTGGA GGCTGCATCA GGATTTACCT CTGAAGAAAA AGATCCTGAG 900
 901 GAATTCTTGA ATATTCTGTT TCATCATATT TTAAGGGTAG AACCTTTGCT  AAAAATAAGA TCAGCAGGTC AAAAGGTACA AGATTGTTAC TTCTATCAAA 1000
1001 TTTTTTATGGA AAAAAATGAG AAAGTTGGCG TTCCCACAAT TCAGCAGTTG  TTAGAATGGT CTTTTATCAA CAGTAACCTG AAATTTGCAG AGGCACCATC 1100
1101 ATGTCTGATT ATTCAGATGC CTCGATTTGG AAAAGACTTT AAACTATTTA  AAAAATTTTT CCTTCTCTGG AATTAGATAT AACAGATTTA CTTGAAGACA 1200
1201 CCCCAGACAG TGCCGGATAT GTGGAGGGCT TGCAATGTAT GAGTGTAAGA  ATGCTACGAC GATCCGGACA CCAGCTGGAA AAACAAGCAG TTTTGTAAAA 1300
1301 CCTGCAACAC TCAAGTCCAC CTTCATCCGA AGAGGCTGAA TCATAAATAT  AACCCAGTGT CACTTCCCAA AGACTTACCC CGACTGGGAG ATTGGAGACA 1400
1401 CGGCTGCATC CCTTGCCAGA ATATGGAGTT ATTTGCTGTT CTCTGCATAG  AAACAAGCCA CTATGTTGCT TTTGTGAAGT ATGGGAAGGA CGATTCTGCC 1500
1501 TGGCTCTTCT TTGGACAGCA TGGCCGATCC GGGATGGTGG TCAGAATGGC  TCAACATTCC CCCAAGTCMC CCMTGSCCCA GAAGTAGGAG AGTACTTGGA 1600
1601 AGATGTCTCC TGGAAGACCC TGSAWTYCCT TGGACTCCCA GGAGAATCCC  AAGGCTGTGC ACGAAGACTG CTTTGTGATG CCATATATGT GCCATGTACC 1700
1701 CAGAGTCCAA CAATGAGTTT GTACAAATAA CTGGGGGTCA TCGGGAAAGG  CAAAGAAACT GGAAGGCAGA GTCCCTAACG TTGCATCTTA TTCGGAGCTG 1800
1801 GCAGTTCTGT TCACGGTCCA TTGCCGGCAA TGGATGTCTT TGTGGTGATG  ATCCTTCAGA AAAGGATGCC TCTGTTTAAA AACAAATTGC TTTTGTGTCC 1900
1901 CTGAAGTATT TAATAAGAAG CATTTTGCAC TCTAGAAAGT ATGTTTGTGT  TGGTTTTTTA AGAAGTCTAA ATGAAGTTAT TAATACCTGA AGCTTTAAGT 2000
2001 TAAGTGCATT GATCATATGA TATTTTTGGA AGCATACAAT TTTAATTGTG  GAAGTTTAAA GCCTCTTTTA GTCCATTGAG AATGTAAATA AATGTGTCTT 2100
2101 CTTTATGGAA AAAAAA                                                                                          2116
       |  10     |  20     |  30     |  40     |  50     |  60     |  70     |  80     |  90     | 100
```

FIG.1

1 GGGGTTTTCT TTTACAC:TC T:CGGTACCG AACTCGGATC CACTAGTAAC GGGCCGCCAG TGTGCTGGAA ATTCGGCACG AGGGTGTGGG GAGCCGGGGC 100
101 CGGCCCGGGA CGCGGGCTGG GGAGCCGGGG CGAGGGGCGA CGCCCCGCCG CCCGAGTTTC CCCCTTTCTA GGGTGAGGAT GGTTCTACAC AGCCACCCGG 200
201 AGTTCCTTAG TTGAAAGGTG CGCCCTGCTG TGACAGAATG TGGTAATTGT AATCTTTAAC ATTTTCATGT AAAACATATT TCCTGATCAT CTTTCCATTG 300
301 TCTTCATGGA AAATTGATAA ATATTTGTGC CTTCCAACTC TCGTCTTGGT TGAATGACTT CATCTTAATA CAACATGGAC ACCACGTTGC TGAAAACATG 400
401 CTTTGGGACT GCCACTGAAT TTATCTTTTG CGGTTTTATG ACAAAGTTAT TAGTAGTTTC CCTTTTTTGA ATTAGTATTT TGAAGTTAAT ATCACAATGA 500
501 GTTCAGGCTT ATGGAGCCAA GAAAAAGTCA CTTCACCCTA CTGGGAAGAG CGGATTTTTT ACTTGCTTCT TCAAGAATGC AGCGTTACAG ACAAACAAAC 600
601 ACAAAAGCTC CTTAAAGTAC CGAAGGGAAG TATAGGACAG TATATTCAAG ATCGTTCTGT GGGGCATTCA AGGATTCCTT CTGCAAAAGG CAAGAAAAAT 700
701 CAGATTGGAT TAAAAATTCT AGAGCAACCT CATGCAGTTC TCTTTGTTGA TGAAA:GGAT GTTGTAGAGA TAAATGAAAA GTTCACAGAG TTACTTTTGG 800
801 CAATTACCAA TTGTGAGGAG AGGTTCAGCC TGTTTAAAAA CAGAAACAGA CTAAGTAAAG GCCTCCAAAT AGACGTGGGC TGTCCTGTGA AAGTACAGCT 900
901 GAGATCTGGG GAAGAAAAAT TTCCTGGAGT TGTACGCTTC AGAGGACCCC TGTTAGCAGA GAGGACAGTC TCCGGAATAT TCTTTGGAGT TGAATTGCTG 1000
1001 GAAGAAGGTC GTGGTCAAGG TTTCACTGAC GGGGTGTACC AAGGGAAACA GCTTTTTCAG TGTGATGAAG ATTGTGGCGT GTTTGTTGCA TTGGACAAGC 1100
1101 TAGAACTCAT AGAAGATGAT GACACTGCAT TGGAAAGTGA TTACGCAGGT CCTGGGGACA CAATGCAGGT CGAACTTCCT CCTTTGGAAA TAAACTCCAG 1200
1201 AGTTTCTTTG AAGGGTGGAG AAACAATAGA ATCTGGAACA GTTATATTCT GTGATGTTTT GCCAGGAAAA GAAAGCTTAG GATATTTTGT TGGTGTGGAC 1300
1301 ATGGATAACC CTATTGGCAA CTGGGATGGA AGATTTGATG GAGTGCA:CT TTGTAGTTTT GCGTGTGTTG AAAGTACAAT TCTATTGCAC ATCAATGATA 1400
1401 TCATCCCAGA GAGTGTGACG CAGGAAAGGA GGCCTCCCAA ACTTGCCTTT ATGTCAAGAG GTGTTGGGGA CAAAGGTTCA TCCAGTCATA ATAAACCAAA 1500
1501 GGCTACAGGA TCTACCTCAG ACCCTGGAAA TAGAAMCAGA TCTGAATTAT TTTATACCTT AAATGGGTCT TCTGTTGACT CACAACCACA ATCCAAATCA 1600
1601 AAAAATACAT GGTACATTGA TGAAGTTGCA GAAGACCCTG CAAAATCTCT TACAGAGATA TCTACAGACT TTGACCGTTC TTCACCACCA CTCCAGCCTC 1700
1701 CTCCTGTGAA CTCACTGACC ACCGAGAACA GATTCCACTC TTTACCATTC AGTCTCACCA AGATGCCCAA TACCAATGGA AGTATTGGCC ACAGTCCACT 1800
1801 TTCTCTGTCA GCCCAGTCTG TAATGGAAGA GCTAAACACT GCACCCGTCC AAGAGAGTCC ACCCTTGGCC ATGCCTCCTG GGAACTCACA TGGTCTAGAA 1900
1901 GTGGGCTCAT TGGCTGAAGT TAAGGAGAAC CCTCCTTTCT ATGGGGTAAT CCGTTGGATC GGTCAGCCAC CAGGACTGAA TGAAGTGCTC GCTGGACTGG 2000
2001 AACTGGAAGA TGAGTGTGCA GGCTGTACGG ATGGAACCTT CAGAGGCACT CGGTATTTCA CCTGTGCCCT GAAGAAGGCG CTGTTTGTGA AACTGAAGAG 2100
2101 CTGCAGGCCT GACTCTAGGT TTGCATCATT GCAGCCGGTT TCCAATCAGA TTGAGCGCTG TAACTCTTTA GCATTTGGAG GCTACTTAAG TGAAGTAGTA 2200
2201 GAAGAAAATA CTCCACCAAA AATGGAAAAA GAAGGCTTGG AGATAATGAT TGGGAAGAAG AAAGGCATCC AGGGTCATTA CAATTCTTGT TACTTAGACT 2300
2301 CAACCTTATT CTGCTTATTT GCTTTTAGTT CTGTTCTGGA CACTGTGTTA CTTAGACCCA AAGAAAAGAA CGATGTAGAA TATTATAGTG AAACCCAAGA 2400

FIG. 2A

2401 GCTACTGAGG ACAGAAATTG TTAATCCTCT GAGAATATAT GGATATGTGT GTGCCACAAA AATTATGAAA CTGAGGAAAA TACTTGAAAA GGTGGAGGCT 2500
2501 GCATCAGGAT TTACCTCTGA AGAAAAAGAT CCTGAGGAAT TCTTGAATAT TCTGTTTCAT CATATTTTAA GGGTAGAACC TTTGCTAAAA ATAAGATCAG 2600
2601 CAGGTCAAAA GGTACAAGAT TGTTACTTCT ATCAAATTTT TATGGAAAAA AATGAGAAAG TTGGCGTTCC CACAATTCAG CAGTTGTTAG AATGGTCTTT 2700
2701 TATCAACAGT AACCTGAAAT TTGCAGAGGC ACCATCATGT CTGATTATTC AGATGCCTCG ATTTGGAAAA GACTTTAAAC TATTTAAAAA AATTTTTCCT 2800
2801 TCTCTGGAAT TAAATATAAC AGATTTACTT GAAGACACTC CCAGACAGTG CCGGATATGT GGAGGGCTTG CAATGTATGA GTGTAGAGAA TGCTACGACG 2900
2901 ATCCGGACAT CTCAGCTGGA AAAATCAAGC AGTTTTGTAA AACCTGCAAC ACTCAAGTCC ACCTTCATCC GAAGAGGCTG AATCATAAAT ATAACCCAGT 3000
3001 GTCACTTCCC AAAGACTTAC CCGACTGGGA CTGGAGACAC GGCTGCATCC CTTGCCAGAA TATGGAGTTA TTTGCTGTTC TCTGCATAGA AACAAGCCAC 3100
3101 TATGTTGCTT TTGTGAAGTA TGGGAAGGAC GATTCTGCCT GGCTCTTCTT TGACAGCATG GCCGATCGGG ATGGTGGTCA GAATGGCTTC AACATTCCTC 3200
3201 AAGTCACCCC ATGCCCAGAA GTAGGAGAGT ACTTGAAGAT GTCTCTGGAA GACCTGCATT CCTTGGACTC CAGGAGAATC CAAGGCTGTG CACGAAGACT 3300
3301 GCTTTGTGAT GCATATATGT GCATGTACCA GAGTCCAACA ATGAGTTTGT ACAAATAACT GGGGTCATCG GGAAAGGCAA AGAAACTGAA GGCAGAGTCC 3400
3401 TAACGTTGCA TCTTATTCGA GCTGGCAGTT CTGTTCACGT CCATTGCCGG CAATGGATGT CTTTGTGGTG ATGATCCTTC AGAAAAGGAT GCCTCTGTTT 3500
3501 AAAAACAAAT TGCTTTTGTG TCCCTGAAGT ATTTAATAAG AAGCATTTTG CACTCTAGAA AGTATGTTTG TGTTGGTTTT TTAAGAAGTC TAAATGAAGT 3600
3601 TATTAATACC TGAAGCTTTA AGTTAAGTGC ATTGATCATA TGATATTTTT GGAAGCATAC AATTTTAATT GTGGAAGTTT AAAGCCTCTT TTAGTCCATT 3700
3701 GAGAATGTAA ATAAA 3715

FIG.2B

8	MSS GLWSQEKVTS	PYWEERIFYL	LLQECSVTDK	QTQKLLKVPK	GSIGQYIQDR	SVGHSRIPSA	KGKKNQIGLK	ILEQPHAVLF	VDEDVVEINE	100
101	KFTELLLAIT	NCEERFSLFK	NRNRLSKGLQ	IDVGCPVKVQ	LRSGEEKFPG	VVRFRGPLLA	ERTVSGIFFG	VELLEEGRGQ	GFTDGVYQGK	QLFQCDEDCG	200
201	FVALDKLEL	IEDDDTALES	DYAGPGDTMQ	VELPPLEINS	RVSLKGGETI	ESGTVIFCDV	LPGKESLGYF	VGVDMDNPIG	NWDGRFDGVL	CSFACVESTI	300
301	LLHINDIIPE	SVTQERRPPK	LAFMSRGVGD	KGSSSHNKPK	ATGSTSDPGN	RRSELFYTLN	GSSVDSQPQS	KSKNTWYIDE	VAEDPAKSLT	EISTDFDRSS	400
401	PPLQPPPVNS	LTTENRFHSL	PFSLTKMPNT	NGSIGHSPLS	LSAQSVMEEL	NTAPVQESPP	LAMPPGNSHG	LEVGSLAEVK	ENPPFYGVIR	WIGQPPGLNE	500
501	VLAGLELEDE	CAGCTDGTFR	GTRYFTCALK	KALFVKLKSC	RPDSRFASLQ	PVSNQIERCN	SLAFGGYLSE	VVEENTPPKM	EKEGLEIMIG	KKKGIQGHYN	600
601	SCYLDSTLFC	LFAFSSVLDT	VLLRPKEKND	VEYYSETQEL	LRTEIVNPLR	IYGYVCATKI	MKLRKILEKV	EAASGFTSEE	KDPEEFLNIL	FHHILRVEPL	700
701	LKIRSAGQKV	QDCYFYQIFM	EKNEKVGVPT	IQQLLEWSFI	NSNLKFAEAP	SCLIIQMPRF	GKDFKLFKKI	FPSLELNITD	LLEDTPRQCR	ICGGLAMYEC	800
801	RECYDDPDIS	AGKIKQFCKT	CNTQVHLHPK	RLNHKYNPVS	LPKDLPDWDW	RHGCIPCQNM	ELFAVLCIET	SHYVAFVKYG	KDDSAWLFFD	SMADRDGGQN	900
901	GFNIFQVTPC	PEVGEYLKMS	LEDLHSLDSR	RIQGCARRLL	CDAYMCMYQS	PTMSLYK					957

FIG.3